

POWER & RADIO TRANSMISSION TOWERS



SatyaVani Projects and Consultants Pvt. Ltd.

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INTRODUCTION

SatyaVani Projects and Consultants Pvt. Ltd. (SVPCPL) is a full service, multi-disciplinary Organization, dedicated to Setting Values for Excellence specialized in the following areas. Our management and technical expertise ensures that each client's objectives are met for the projects of any scale.

- Power Transmission Towers,
- Microwave Telecommunication Towers.
- Architectural & Landscape,
- Civil & structural engineering,
- Project detailed engineering,
- Project management,
- Mechanical & Electrical engineering
- **HVAC** Design Engineering,
- Structural Safety and Quality Audit & Certification,
- Contract Administration,
- **Construction Management**

We, SatyaVani Projects and Consultants Pvt. Ltd., Hyderabad, are the Consultants for Microwave Communication Towers and have designed various types of Microwave Communication Towers both Roof Top as well as Ground Based. Our Tower Designs are being used by various Cellular Operators in India & Overseas such as Viom Networks Limited, TATA Communications Ltd, Idea Cellular, Ericssons, Tata Teleservices Ltd., Nortel India Networks, Spice Communications Ltd, Hutchisson Essar Mobile Services Ltd., Hutchisson Essar Punjab Ltd., etc. We have been rendering Project Management Consultancy Services and Inspection and Quality Audit of Microwave Communication Towers already Erected and under Erection for Idea Cellular Ltd., Tata Teleservices Ltd., Nortel Networks (India) Pvt. Ltd., Hutchisson Essar South Ltd., Ericsson (India) Pvt. Ltd., Spice Communications Ltd., Hutchisson Telecom East Ltd., BPL Mobile Cellular Ltd., Quipo Telecom Infrastructure Pvt. Ltd., etc.

We have rendered Designing and Project Management Consultancy Services and Inspection and Quality Audit of Microwave Communication and Transmission Tower already Erected and under Erection during the last 22 years for

- Kalpataru Power Transmission Ltd Transmission Tower designing and Drawings
- Abhisek Contech India Pvt Ltd Transmission Tower design and design vetting



- Arabian International Company (aic) Tower Testing station at Arab
- Jindal Power Limited Transmission Tower designing and Estimations
- Two Degrees Mobile Limited, Auckland, New Zealand
- Various Projects Executed with International Clients
- Idea Cellular Ltd., Pune, Ahmedabad, New Delhi and Hyderabad.
- Tata Teleservices Ltd., Hyderabad, Chennai, Banglore, Kerala, Gujarat
- Nortel Networks (India) Pvt. Ltd., for all their Towers situated in the States of Bihar, Orissa, West Bengal, North East, Assam and Andaman & Nicobar Islands of East India and in the States of Andhra Pradesh, Karnataka, Tamilnadu, Chennai Pondicherry and Kerala of South India.
- Hutchisson Essar South Ltd., UP West, Kolkata, Pune and Chennai.
- Ericsson (India) Pvt. Ltd., Karnataka, Tamilnadu, Kerala and Andhra Pradesh.
- Spice Communications Ltd., Banglore and Karnataka.
- Hutchisson Telecom East Ltd., Kolkata and West Bengal.
- BPL Mobile Cellular Ltd., Pune. And Chennai.
- Quipo Telecom Infrastructure Pvt. Ltd., Banglore and Karnataka.
- Dishnet Wireless Ltd., Andhra Pradesh, Bihar, Orissa, Tamilnadu and Karnataka.
- Alcatel (India) Pvt. Ltd., Madhya Pradesh and Bhopal.
- HFCL (Himachal Futuristic Communications Ltd) Assam, North East States, West Bengal, Kolkata, Orissa, Bihar, Jharkhand, and Andhra Pradesh
- VIOM Network Ltd Andhra Pradesh, Kerala, Karnataka, Tamil Nadu, Orissa, Delhi, Uttar Pradesh, Bihar, NE states.
- TATA Communications Ltd Maharashtra
- Tower Vision Ltd Orissa
- Reliance Corporate IT Park limited North East States (India), Jharkhand, Bihar, Orissa, Andhra Pradesh, West Bengal.

The following other services are being rendered by us:

- Design and Detailing of various types of Microwave Communication Towers both Roof Top as well as Ground Based
- Structural Consultancy for Roof Top Sites Buildings.
- Site Specific Engineering.
- Base Foundation Design.
- As Built Drawings.
- TLVA and Structural Stability of Buildings.
- Inspection of Microwave Communication Towers both Ground Based as well as Roof Top already Erected and Under Erection.



- Foundation Stage Inspection of the Microwave Communication Towers.
- Inspection of completely Assembled Proto Type Tower at the Manufacturers works:
- Inspection and Certification of Microwave Communication Tower Materials to the Sites
- Quality Audit Inspection of Microwave Communication Towers.
 - 1. Foundation Stage Inspection Pre Erection Stage.
 - 2. Erection Stage Inspection.
 - 3. Inspection of completely Erected Towers.
- Project Management Services in respect of Microwave Tele Communication towers.

The Commitment to Quality Engineering services has been proven by the distinction the firm achieved by offering off shore engineering services for projects in USA & Middle East countries.

The Company has professionals with varied specializations. We are backed by state of the art infrastructure to provide the best Engineering services. The staffs have undergone extensive training and are experienced in the evaluation of projects, development of engineering design, cost estimates, contract administration, inspection services and complete project management services.

Mr. P. Surya Prakash, Managing Director of SVPCPL is a Post Graduate in M.S structures from IIT Madras and started his own Engineering Consultancy Organization viz., SatyaVani Projects and Consultants Pvt. Ltd., (SVPCPL) the Company has steadily grown and evolved into one of the premier Microwave Communication and Power Transmission Towers Design and Detailing Organization in India, currently employing over 250 Staff members.

Headquartered in Hyderabad, Andhra Pradesh, SVPCPL, has rendered Professional Engineering Services to almost all Cellular Operators in India and abroad spanning Government and Private Industry. We believe that every client is entitled to receive prompt and professional service. There are about 6 Directors are experienced and have expertise of more than 15 years in specific subject matter specializes.



ORGANIZATION CAPABILITIES

SVPCPL is a leading and efficiently functioning Consultancy Organization with a team of Professional Engineers and Architects offering Consultancy Services for Engineering Intensive Construction Projects including Civil & Structural Works.

SVPCPL's PROJECTS include, but not limited to:

- Power Transmission Towers
- Microware Communication Towers

A. For Power Transmission Towers:

- Walkover Survey
- Check Survey & Detailed Survey
- Soil Investigation
- Transmission Line Towers Value Engineering
- Transmission Line Towers Route Alignment & Tower Spotting, Stringing Chart
- Design of Transmission Line Towers, Special Towers, River Crossing, Transposition
- Detailing of Assembly, Fabrication Drawings
- Foundations optimized design/detailing
- Design of Sub Station & Switch Yards
- Tower Testing Station Design, DPR & Feasibility
- Transmission Line Up-gradation.
- Project Planning & Scheduling.
- Tower Software Supply & Training.
- Tower Design Standardization.
- Tower Design Checking/Verification.
- Bid documents preparation/evaluation.
- Compact line design.
- Inspection and Certification of Transmission Towers.
- Project Management / Monitoring.
- Quality Control & Quality Assurance
- Pre-Dispatch Inspection
- On Site Quality Audit
- Testing Coordination



B. For Microwave Communication Towers

- Consultancy for Infrastructural Facilities for Microwave Projects.
- BTS Engineering & RF Surveys.
- Tower and Foundations optimized design / detailing.
- Tower and Foundations component drawing preparation (shop drawings).
- Tower software supply & training.
- Tower design standardization.
- Tower design checking/verification.
- Bid documents preparation/evaluation.
- Design of special towers
- Inspection and Certification of Towers.
- Project Management / Monitoring.
- Buildings Structural Stability & Safety Certification with NDT for Roof Top Towers.

At SVPCPL's, office all professional works on CAD work station, networked fully which allows for a seamless interface among all the members of the design team. The State-of- Art Technology, coupled with enhanced communications and an in-depth knowledge of Client requirements, enable SVPCPL to assist clients in moving their projects smoothly and efficiently.

SVPCPL strives to maintain its high reputation in the Engineering Profession for Technical Innovation, Cost-effective and practical designs, timely performance and responsiveness to the needs of the clients. This is accomplished on each project by employment of skilled and experienced professional and technical staff, the use of latest computer and analytical technologies and the application of well-proven project management and control systems.

FACILITIES AND EQUIPMENT

Our office is centrally located in the city of Hyderabad. The office is fully furnished with Central Air Conditioning & has ample space of 6500 sft, 72 work stations, supporting hardware and software and with the State-of-Art functioning connected by LAN & Internet.

We are fully automated Design office. The office is equipped with all the application software general and specific to make it's services faster and with total quality.



CAD software	Software for Detailing and Drafting of Drawings				
	Computer Aided Building Frame Analysis, Design and detailing				
CABFADD	software. Fully automated software for any RCC/Steel Framed				
	Structure				
Tank CAD	Software for optimum design of Elevated water tanks of 5 Types and				
Talik CAD	any Capacity.				
Tower CAD	Software for design of steel lattice towers				
AUTO COST	Estimation & Costing Software				
BUILD PROJECT	Construction Project Management Software				
PIS	Online Project Information System				
My FAB	Fabrication Management Software				
In-house software	Development capabilities in languages like Fortran, C, and Auto LISP				
for Engineering Applications					
Surfer	Software for Generation of Contours & Earthwork quantity takeoff				
Others	AutoCAD 2006 & STADD PRO 2006				

			i3 & i5 based computers, With Color Monitors working in Windows 10 Professional- OS 60 Nos.
			NT Networking Servers 2 Nos.
			AO size HPDesignjet-4500 Color Plotter 2 Nos.
List of		office	A3 size TVSE CAD - Calligra Printer with Color option 3 No.
equipmer	nts.		A4-size HP Desk Jet Printer with color option 5 Nos.
		Power Backup all the Systems and Peripherals 20 kVA UPS	
			Telephones 32 lines.
			Dedicated Internet Service.



CONTACT DETAILS & ORGANISATION CHART

Hyderabad Registered Office

Name: SatyaVani Projects and Consultants Pvt. Ltd.,

Address: # A – 203 Kushal Towers, Khairatabad

Hyderabad – 500004, Telangana, India

Email: suryapp@yahoo.com , svpcpl@gmail.com ;

mukherjee@satyavaniindia.com

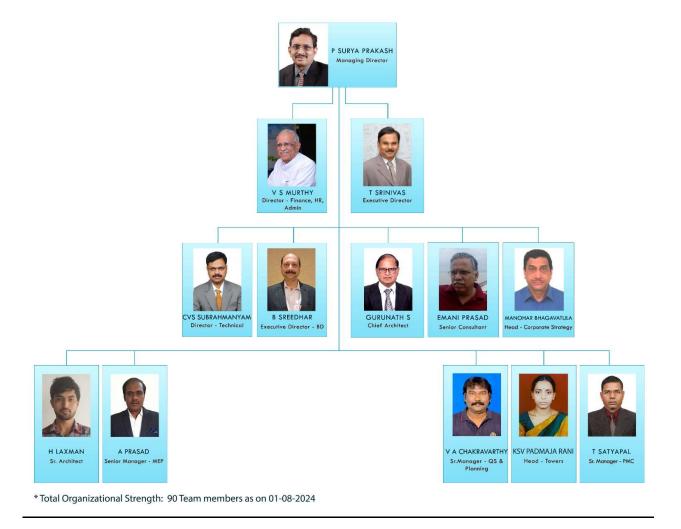
Web: www.svpcpl.com

Contact Person: Mr. P. Surya Prakash, Mob: 9393348484 / 9848048484



ORGANIZATION CHART







SI. No.	PROJECT & LOCATIONS	CLASSIFICATIONS	SERVICES RENDERED	CLIENT NAME
Α	POWER TRANSMISSION T	OWERS:		
1	220 kV DC A type Tower	Power Transmission Project	Tender Design	M/s. KADEVI INDUSTRIES LIMITED A1-A2, Electronic Complex, Kushaiguda, Hyderabad 500 062
2	Sardar Sarovar Vidyut Nigam, Ahmedabad.	Power Project	220 kv Switchyard – Design & Detailing	Vijaya Constructions, Hyd
3	Srisailam – VTS – Srisailam, Hyderabad	Towers	400 kv Transmission Lines – Towers Design & Detailing	Bhanu Construction Co.,
4	KTPS – Stage V for APSEB, Hyderabad	Power Project	200 kv Switchyard – Design & Detailing	APSEB
5	Anantapur Division, APSEB, Hyderabad	Power Transmission Project	Towers	APSEB, Hyderabad
6	132 kV Transmission lines	Power Transmission Project	Tender Design	MSEB/TPL
7	11/33 kV Distribution Line	Power Transmission Project	Tender Design	GRIDCO/ SPCC
8	220/400 kV Substation	Power Transmission Project	Towers Design & Detailing	APSEB / Bhanu Construction Pvt Ltd
9	220kv & 132kv D/C Transmission Line Towers for Assam State Electricity Board	Power Transmission Project	Design & Detailing	ECI Engineering & Construction Company Limited, Hyderabad.



10	Preparation of Structural Design and Drawings and BOM for Transmission Line ST Tower	Power Transmission Project	Structural Design and Drawings and BOM	Kalptaru Power Transmission Limited, 101 Part III GIDC Estate, Sector – 28, Gujarat 382028
11	Transmission design and Vetting of 14 Nos of Towers	Power Transmission Project	Transmission design and Vetting	Abhisek Contech Pvt Ltd, Plot No : MIG – B 18, Brit Colony, Bhubaneswar
12	Strengthening for STPS Transmission Project	Power Transmission Project	Estimation, Tower Weight and Foundation design	Jindal Power Limited, Jindal Centre, Tower – B, Plot 2, Gurgaon - 122001
13	APHM & ECRP Project for World Bank pertaining to APTRANSCO Works.	Power Project	Consultancy for Design Criteria and Construction Practices of 220 kv, 132 kv Transmission Line and Substation Towers and 33 kv & 11 kv Distribution Poles.	
14	Samalkot Power Plant	Power Project	Consultancy for Civil & BOP Works	
15	Infrastructure for Distribution network Automation SCADA	Power Transmission Project	Design & Detailing	AP Transco / Kadevi Engineering Company Pvt. Ltd.
16	132 kV, 220 kV T/L & Substation Towers & 33 kV & 11 kV	Power Transmission Project	Design Criteria& Construction Practice, Checking & Work Certification	Govt. of Andhra Pradesh
17	Power Plant	Industrial Project	Consultancy for EPC technical data	Gautami Power Ltd.
19	KTPS-STAGE V APSEB, Hyderabad	Power Transmission Project	Towers & Booms	C &S Hyderabad
20	Bhusawai- BBLR line MESB Bombay	Power Transmission Project	Towers	Bhanu Construction Pvt. Ltd.



21	400kV Transmission Line Towers and Foundation for Construction of 400kV Vizag - Khammam DC line for APTRANSO	Power Transmission Project	Design & Detailing	Bhanu Construction Pvt. Ltd. / IVRCL
22	LEH - KARGIL- NHPC 66kv S/C Tower	Power Transmission Project	Detailing	A2Z Maintenance & Engineering services Pvt. Ltd., Gurgaon.
23	66/33kv Substation of Switchyard Towers, Gantry Beams & Equipment Structures for PHPA, Bhutan.	Power Transmission Project	Design & Detailing	Siddhartha Engineering Limited
24	345kv D/C Lattice Towers with American Specification for Cross Texas Transmission	Power Transmission Project	Tender Design	Aster Teleservices Pvt. Ltd., Hyderabad.
25	220Kv D/C Transmission Line from Nalagarh to Baddi on 400kv Towers for Himachal Pradesh State Electricity Board Limited	Power Transmission Project	Design & Detailing	M.J.Engineering Works (P) Ltd., New Delhi.
26	765kv S/C Transmission Line from Raichur to Sholapur	Power Transmission Project	Designd	Raichur Sholapur Transmission Company Ltd., Mumbai.
27	132kv 2º Dev. Type 'A' Spun Concrete Transmission monopole	Power Transmission Project	Design & Detailing	HBL Power Systems Limited.
28	220 kv D/C line from existing 400kv at	Power Transmission Project	Exicussio Design & Detailing	M/s Jindal steel & power limited.
29	220 kv S/C Transmission line tower(Cajamarca norte-caclic)	Power Transmission Project	Detailing	Kalpataru power transmission limitd



30	220kv narrow base tower A.B,C& D	Power Transmission Project	Detailing	Deepak Galvanizing
31	220kv S/C on D/C tower	Power Transmission Project	Design check	M/s Kadevi Indusrties Ltd.,
32	765 kv S/C Transmission line tower	Power Transmission Project	Design check	M/s. Megha Engineering & Inftrastructure Ltd.,
33	765 kv S/C& D/C Transmission line tower	Power Transmission Project	Tender Design	M/s Jindal steel & power limited.
SI. No.	PROJECT & LOCATIONS	CLASSIFICATIONS	SERVICES RENDERED	CLIENT NAME
В	MICRO WAVE COMMUNIC	CATION TOWERS:		
1	Triangular Tubular for 40meter and 170 kmph (For Reliance)	Ground Base Tower (GBT) – 40 meter and 30 meter truction.	Tower Design and Foundation design Approval from CPRI and Test at L & T	M/s. KADEVI INDUSTRIES LIMITED A1-A2, Electronic Complex, Kushaiguda, Hyderabad 500 062
2	30 meter and 200 kmph 1AI ECTA System	30 meter Ground Base Tower	Tower Designs and Foundation designs	M/s. KADEVI INDUSTRIES LIMITED A1-A2, Electronic Complex, Kushaiguda, Hyderabad 500 062
3	TLVA	RTTS and GBTS	Structural Stability of Tower and foundation drawings	M/s. Viom Networks Limited, Viom Tower, Plot No. 14 A, Sector – 18, Maruti Industrial Complex, Gurgaon - 122015
4	RTT and RTP	RTT and RTP and Building Stability	Structural Stability of Tower and foundation drawings	M/s. TATA Communication Ltd, Pune-Alandi Road Dighi, Pune 411015
5	Building Stability and Tower Design (RTT)	Building Stability and Tower Design (RTT)	Structural Stability of Tower and foundation drawings	M/s. Reliance Corporate IT Park limited
6	30 meter height hybrid tower & 170 kmph Triangular Tower	Tower Design and foundation drawings	Tower Design and Foundation for different soils soft, loose and hard	M/s. KADEVI INDUSTRIES LIMITED A1-A2, Electronic Complex, Kushaiguda, Hyderabad 500 062



7	Pile Foundation design	Foundation drawings for 39 meter and 40 meter Tower	Tower designs and drawings	M/s. KADEVI INDUSTRIES LIMITED A1-A2, Electronic Complex, Kushaiguda, Hyderabad 500 062
8	30 meter Tower	m/w GBT	Design and Foundation along with approval from SERC	M/s. KADEVI INDUSTRIES LIMITED A1-A2, Electronic Complex, Kushaiguda, Hyderabad 500 062
9	60 meter Tower	GBT	Design and foundation drawings	M/s. Anu Structures., Plot No 6, IDA, Cherlapally, Rangareddy - 501301
10	30 meter Chimney	Supporting Structure	Design and Foundation drawings	M/s. AGILE INFRASTRUCTURE, 3-83/8/3, SKANDA ENCLAVE, NIZAMPET VILLAGE, KUKATAPALLY, Hyderabad - 500090, Andhra Pradesh
11	18 meter Hexagonal Tower	GBT Foundation	Design and Drawings	M/s. Viom Networks Limited, Viom Tower, Plot No. 14 A, Sector – 18, Maruti Industrial Complex, Gurgaon - 122015
12	Pile foundation for M/W tower	GBT Foundation	Design and Drawings	M/s. Viom Networks Limited, Viom Tower, Plot No. 14 A, Sector – 18, Maruti Industrial Complex, Gurgaon - 122015
13	30 meter Tower	GBT foundation	Tender drawings	M/s. MPOWER INFRATECH (INDIA) PVT. LTD. Plot No 28, Lane-IV,Phase-II, IDA Cherlapally,Hyderabad- 500051
14	30 meter Mast	GBT	Design and Drawings	M/s. MARUTHI TEKNOLOGIES. Office: D. No: HIG – 4, APHB Layout, Mithilapuri Colony, Madhurawada, Visakhapatnam – 530041
15	36 meter Mast	GBT	Design and Drawings	M V Communications Plot no 54, Shed No. 23, IDA Phase – II Cherlapally, Hyderabad-500051 (gvdtowers@gmail.com)



16	30 meter - Mast	Hybrid Mast GBT	Design Check	M/s. Tata Communications Limited 5th Floor, Tower-C, Corporate Centre Plot no. C21 & C36; Bandra Kurla Complex, Near MTNL, Bandra (East) Mumbai 400 051
17	Structural Stability for Building and Towers	Survey, Structural Stability and Foundation designs	Survey, Structural Stability checking and Foundation drawings and Stability certification	HFCL (RIL) for Andhra Pradesh, Kolkata, Jharkhand, Bihar, Ranchi, Assam, North East States,
18	Communication Towers	Site Survey, Design of Site and Foundation & QA	Survey, Designs & QA	Tow Degrees Mobile Ltd., Auckland, New Zealand. (Formerly NZ Communications)
19	Microwave Communication Towers	Various Types of MW Towers both GBT & RT.	Inspection & Quality Audit	Bharti Airtel Ltd., Karnataka, Tamilnadu, Kerala, Andhra Pradesh
20	Microwave Communication Towers	Various Types of MW Towers both GBT & RT upto 100 m ht.	Design & Detailing, Inspection & Quality Audit	TVS Interconnect Systems Limited, Karnataka, Andhra Pradesh
21	Microwave Communication Towers	Various Types of MW Towers both GBT & RT upto 100 m ht.	Design & Detailing	Hutchison Essar Mobiles Ltd., Hyderabad
22	Microwave Communication Towers	Various Types of MW Towers both GBT & RT upto 100 m ht.	Design & Detailing	Ericsson India Pvt. Ltd., New Delhi
23	Inspection of Microwave Communication Towers	Quality Audit and Inspection of GBT & RT MW Communication Towers	Inspection & certification	Nortel Networks (India) Pvt. Ltd., Quipo Telecom, Spice
24	Inspection of Microwave Communication Towers	Quality Audit and Inspection of GBT & RT MW Communication Towers	Inspection & certification	Hutchisson Essar South Ltd., for their UP West, Kolkata, Chennai, Pune Circles
25	Inspection of Microwave Communication Towers – Foundation, during Erection & after Erection	Ground Based Towers upto 100 m height	Inspection & Certification	Dishnet Wireless Limited for their Orissa, Bihar, Andhra Pradesh, Tamilnadu & Karnataka Circles



26	Inspection of Microwave Communication Towers – Foundation, during Erection & after Erection	Ground Based Towers upto 100 m height	Inspection & Certification	Quipo Infrastructure Pvt. Ltd for their Karnataka & Banglore Circles. VIOM: Kerala, Karnataka, AP, Mumbai
27	Inspection of Microwave Communication Towers – Foundation, during Erection & after Erection	Quality Audit and Inspection of GBT & RT MW Communication Towers	Inspection & certification	Spice Communications Ltd., for their Banglore and Karnataka Circles
28	Inspection of Microwave Communication Towers	Quality Audit and Inspection of GBT & RT MW Communication Towers	Inspection & certification	BPL Mobile Cellular Ltd., Pune
29	Inspection of Microwave Communication Towers	Quality Audit and Inspection of GBT & RT MW Communication Towers	Inspection & certification	BPL Mobile Cellular Ltd., Coimbatore
30	Inspection of Microwave Communication Towers	Quality Audit and Inspection of GBT & RT MW Communication Towers	Inspection & certification	Hutchisson Telecom East Ltd., Kolkata
31	Department of Telecommunication DOT - Pune	Micro Wave Communication Towers	Design & Detailing	Bhanu Construction Pvt., Ltd
32	Wind farm at Palladam	Micro Wave Communication Towers	Design & Detailing	DLF Delhi
33	Infrastructure Facilities for Cellular Phones	Micro Wave Communication Towers	Design & Detailing	Tata Projects Hyderabad
34	Infrastructural Facilities for Cellular Phones	Micro Wave Communication Towers	Design & Detailing	Hara- BPL
35	Infrastructural Facilities for Cellular Phones	Micro Wave Communication Towers	Design & Detailing	Hara-HFCL



36	Lighting Protection Tower	Micro Wave Communication Towers	Design & Detailing	Hara- SHAR
37	Telecommunication Towers & Radio Towers of Different Heights for different customers all over India	Radio & Microwave Communication Towers	Design & Detailing	ARM, TATA PROJECTS, ASTER TELESERVICES, ENERTECH, SIEMENS, KADEVI ENGG CO., ETC.
38	Telecommunication Towers for costal and non- costal areas (Green Field & Roof Top)	Micro Wave Communication Tower	Inspection of Foundations & Erection, Design & Detailing	Birla AT&T Pune& Gandhi Nagar, Tata Teleservices Ltd., Chennai, Karnataka, Kerala, Hyderabad, Delhi & Gujarat Areas;
39	Telecommunication Towers for costal and non- costal areas (Green Field & Roof Top)	Micro Wave Communication Tower	Inspection of Foundations & Erection, Design & Detailing	Hutchisson Essar South Ltd., Hyderabad; Tata Projects Ltd., Hyderabad, Karnataka & Gujarat
40	Roof Top Towers	Micro Wave Comm., Tower	Structural Stability	Ericsson Communications, Delhi, Kerala, Tamilnadu, Andhra Pradesh & Karnataka
41	30m_ 140 & 180 kmph_Hybrid Tower	GBT	Tower design and drawing	M/s.SR Tower (India) pvt Ltd.,
42	30m_ 170 kmph_Hybrid Tower	GBT Strengthening	Tower design	M/s.SR Tower (India) pvt Ltd.,
43	60m _ 140 Kmph_Hybrid Tower	GBT	Tower design	M/s M.V Communication / M.V Infra Services Pvt. Ltd.,
44	30m_ 140 & 170 kmph_Hybrid Tower	GBT	Tower design and drawing	M/s Tata Communication
45	50m_ 140 & 170 kmph_Hybrid Tower	GBT	Tower design and drawing	M/s Tata Communication
46	30m_140 & 180 Kmph_Mast Tower	GBT Strengthening	Tower design	M/s Tata Communication



47	24m & 30m_160 & 110 Kmph_Hybrid Tower	RTT	Tower design	M/s Sify Technologies Ltd.
48	60m _ 170 Kmph_Hybrid Tower	GBT	Tower design and Foundation	M/s Kdevi Industries Ltd.
49	45m_160Kmph_Angular Tower	GBT (Hill Top)	Tentative Design	M/s Kdevi Industries Ltd.
50	TLVA	GBT / RTT	Tower Loading and Validation Activity	M/s Viom Networks Ltd.
51	HFCL	RTT	Foundation Design and drawing	M/s Reliance JIO Infocomm.Ltd
52	Roof Top Tower	Micro Wave Communication Tower	Foundation Design and drawing	M/s Tower Vision Pvt Ltd.
53	Roof Top Tower	Micro Wave Communication Tower	Foundation Design and drawing	M/s Ascend Telecom Infrastructure Pvt Ltd.
54	Roof Top Tower	Micro Wave Communication Tower	Foundation Design and drawing	M/s Tata Communication



LIST OF COMPLETED AND ONGOING PROJECTS FOR PMC SERVICES

SI. No.	PROJECT & LOCATIONS	CLASSIFICATIONS	SERVICES RENDERED	CLIENT NAME	STATUS
1	700 KM Transmission Line - Simhadri vizag to Hyderabad	400 KV DC Transmission Line	Project Management Services and Quality Audit	Bhanu Construction Pvt. Ltd for APTRANCO	Completed
2	32 KM Transmission Line - Dongamauha to Punjipatra in Orissa	220 KV DC Transmission Line	Project Management Services and Quality Audit	Kadevi Industry for Jindal Power	Completed
3	28 KM Transmission Line - Samarlakota Power Plant	400 KV DC Transmission Line	Project Management Services and Quality Audit	Kadevi Industry for Reliance Power	Completed
4	PAN INDIA	GBT, RTT and RTP Communication Towers ; Approx 12450 Towers Audited for the last ten years	Quality Audit and Join Measurement Sheets (JMS)	INDUS Towers Ltd, Gurgaon	Completed
5	PAN INDIA	GBT, RTT and RTP Communication Towers ; Approx 4210 Towers Audited for the last 3 years	Quality Audit	VIOM Networks Limited, Gurgaon	Completed and Presently Working for upcoming sites
6	Bihar, Jharkhand, Orissa, West Bengal, Andhra Pradesh, North East States (NESA),	RTT and RTP Communication Towers, Structural Stability; Approx 2100 towers for the last 3 years	Structural Stability	Reliance Jio Infocomm Itd	Completed and Presently Working for upcoming sites
7	Andhra Pradesh, Kolkata, Tamil Nadu, Delhi, Bihar, Karnataka	GBT, RTT and RTP Communication Towers ; Approx 6150 Towers EMS Survey for the last 7 years	EMS Survey	Vodafone East, Vodafone South,	Completed



8	Kerala, Tamil Nadu, Karnataka, Andhra Pradesh,	GBT, RTT and RTP Communication Towers : Approx 4825 Towers EMS Survey for the last 7 years	Tower Health Check up and Strengthening	VIOM Networks Limited, Gurgaon	Completed and Presently Working for upcoming sites
9	Andhra Pradesh, Kolkata, Tamil Nadu, Delhi, Bihar, Karnataka	GBT, RTT and RTP Communication Towers ; Approx 5225 Towers EMS Survey for the last 7 years	Tower Health Check up and Strengthening	Vodafone East, Vodafone South,	Completed
10	Andhra Pradesh, Kolkata, Tamil Nadu, Delhi, Bihar, Karnataka	GBT, RTT and RTP Communication Towers ; Approx 325 Towers EMS Survey for the last 7 years	Quality Audit	Aircel	Completed
11	Andhra Pradesh, Kolkata, Tamil Nadu, Delhi, Bihar, Karnataka	GBT, RTT and RTP Communication Towers ; Approx 168 Towers EMS Survey for the last 7 years	Quality Audit	Idea India	Completed



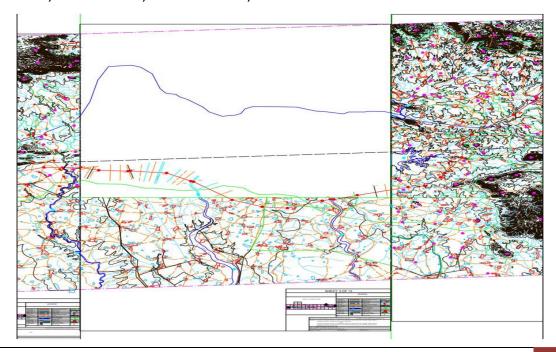
Our Capabilities - Transmission Towers

Walkover Survey:

- It is implemented to decide the appropriate alignment.
- From start point to destination, the alternate routes chosen by using Google Maps.



 Drive through the route and identify the high ways, roads, rivers, forest, agricultural lands, telecom lines, mountains etc.,





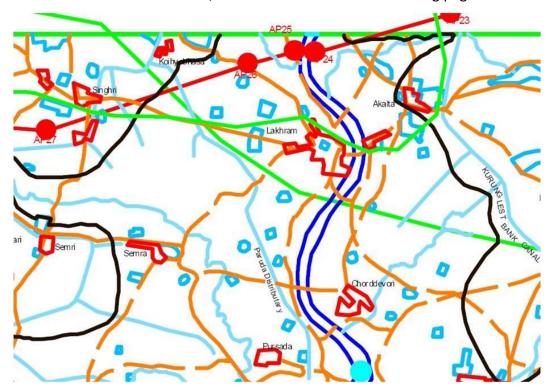
Video recording is also done in this walkover survey, apart from standard formats.





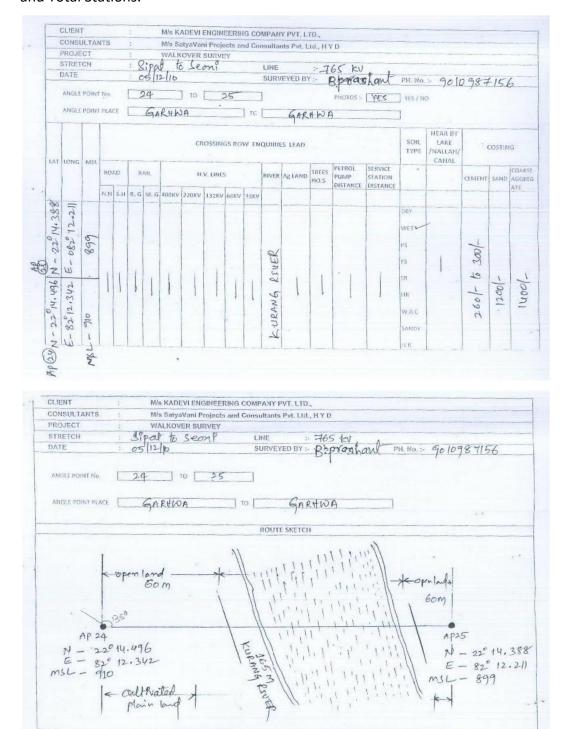
Check Survey and Detailed Survey:

After initial routes are decided, location of towers is marked using pegs.





 Levels, Elevations, Curves etc., are calculated by using Chain, Dumpy Level, Theodolite and Total Stations.





- If at all the proposed location is not suitable an alternate location is marked.
- Soil conditions, local issues, rivers may affect finalizing the tower location.



Soil Investigation:

Soil investigation is essential for all civil engineering works.





 The design of any foundation of structure fully depends upon the soil conditions in the location.



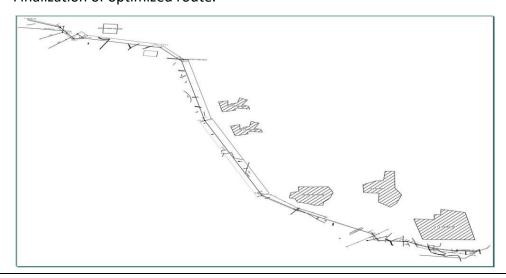
- They are different types of soils. Some of them are.
 - Cohesive Soils
 - These are comprises of clay, silt, and soft shale etc.,
 - The size of Cohesive soils less than 4.75mm.
 - Non-cohesive Soils
 - This group of soils includes gravels and sand.
 - The size of cohesive soils greater than 4.75mm.

Transmission Line Tower Value Engineering:

- Value engineering is approach for improving "Value" of design by using an examination of function.
- Value can be defined as the ratio of function to cost.
- Value can be increased by either improving the function or reducing the cost.
- Value engineering involves execution in multi step plan like Information, Creation,
 Evaluation, Development and Presentation.

Transmission Line Towers Route Alignment, Tower Spotting and Stringing Chart:

- Route alignment (Route options are jotted down).
- Finalization of optimized route.

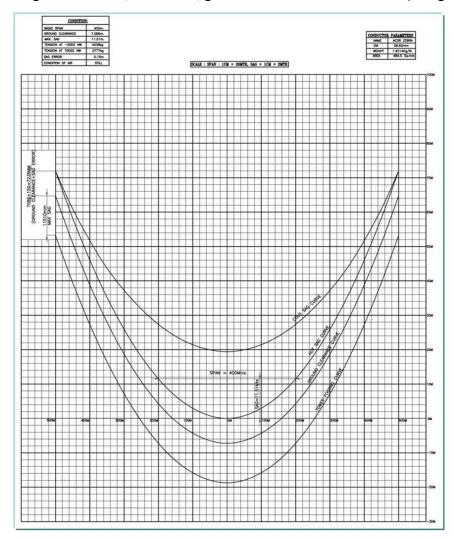




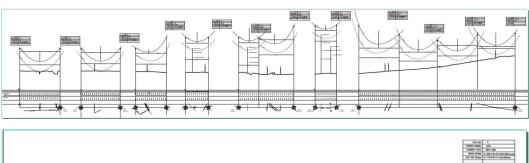
Tower spotting (using peg marking).

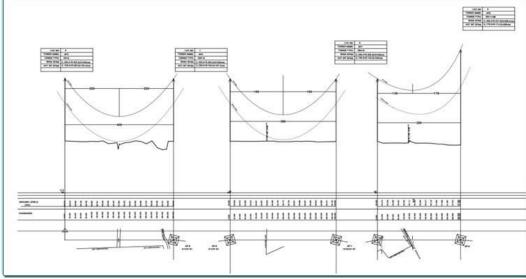


Heights of towers, extension, ground clearances are all fixed (using stringing charts).









Number of towers and their types are decided.

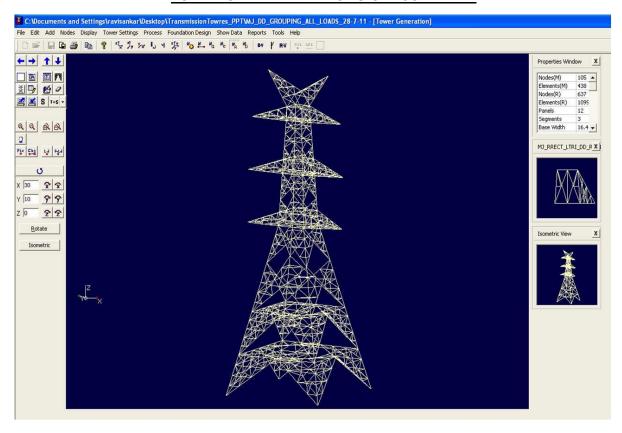
2				-	Deviatio	Section	Section	Wind	Ac	ijacent S	pan	Weig	ht Span	(Cold)	Weig	ht Span	(Hot)	Major Crossings (With in				
SI.N o.	No.	Type Of Tower	Deviation Angle (DMS)	Span (M)	n of angle	Length (M)	Chainage (M)	Span (M)	Left		Total					Right		23m either side from CL) Remarks	Easting	Northing	Elevation	Twr Extn
1	TT	DD + 0	Tentative			0	0	58	0	116	116	0	76	76	0	71	71		621379.335	1884386.577	99.405	0
			AP 1	116	AP 1													Compound wall of Samalkot Power Ltd				
2	AP - 1	DD + 0	30-17-34 RT	10	30-17-34 F	116	116	101.5	116	87	203	40	69	109	45	62	107		621431.772	1884282.942	98.395	0
			AP 2	87	AP 2								2					Compound wall of Samalkot Power Ltd & Drain & BT Road				
3	AP - 2	DD + 0	50-39-28 RT	5	50-39-28 F	87	203	180	87	273	360	18	142	160	25	140	165		621419.079	1884197.541	97.28	0
			AP 3	273	AP 3													Reservoir &BT Road&Drain crossing				
4	AP - 3	DC + 3	26-07-41 LT	12	26-07-41 L	273	476	320.5	273	368	641	131	201	332	113	197	310		621185.216	1884057.637	93.604	3
			AP 4	368	AP 4													Reservoir &Cable Rack, Pipe line Rack crossing				
5	AP - 4	DB 2 + 3	24-56-14 RT	12	24-56-14 F	368	844	290.5	368	213	581	167	147	314	171	136	307		620985.078	1883749.256	90.326	3
				213														BT Road, Drain, compound wall of Samalkot Power Ltd LT Line crossing				
6	AP - 5	DD + 0	Tentative			213		106.5	213	0	213	66	0	66	77	0	77		620805.152	1883636.478	89.112	0



Design of Transmission Line Towers, Special Towers, River Crossing, Transposition:

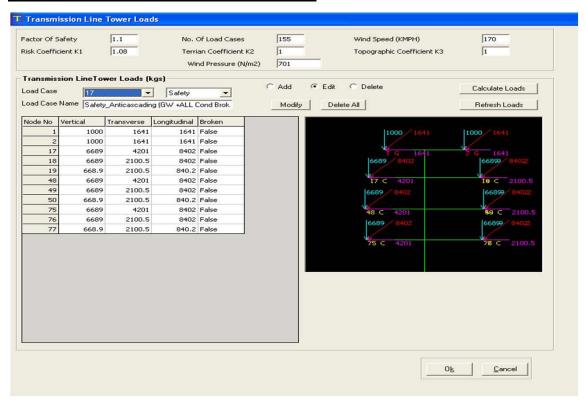
- We have in-house software to optimize the design as per the relevant National /
 International standards for different types of towers such as
 - Single Circuit,
 - o Double Circuit and
 - Multi circuit.

TOWER GENERATED IN TowerCAD SOFTWARE



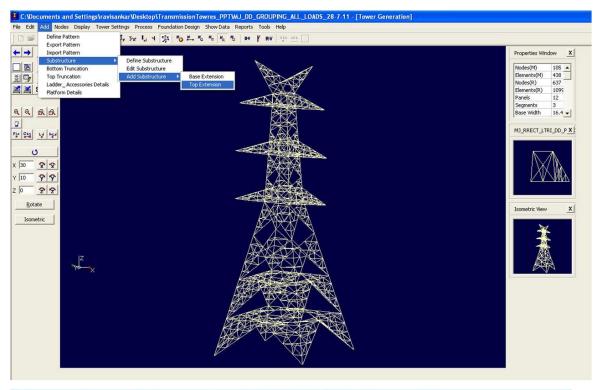


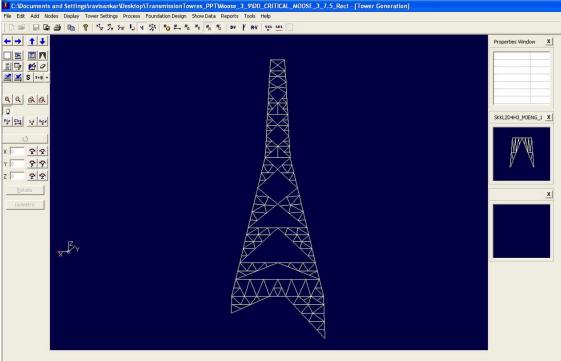
INPUT DATA IN TowerCAD FOR TOWER LOADS



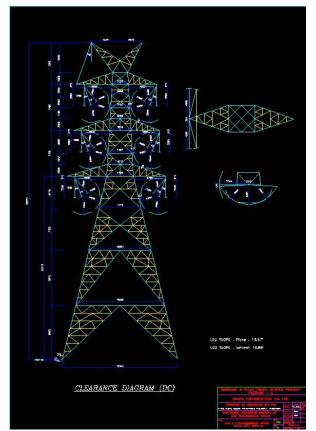


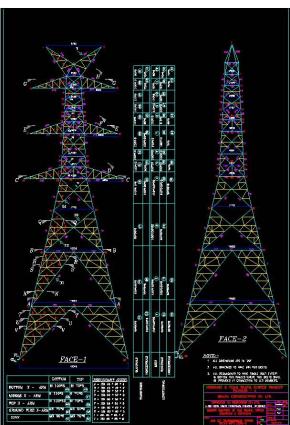
Special towers like leg extensions & body extensions.











River crossing tower and High way crossing tower.

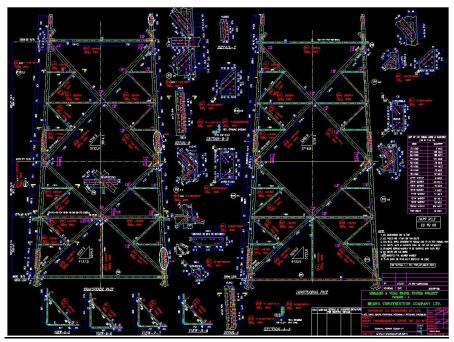


Detailing of Assembly, Fabrication Drawing:

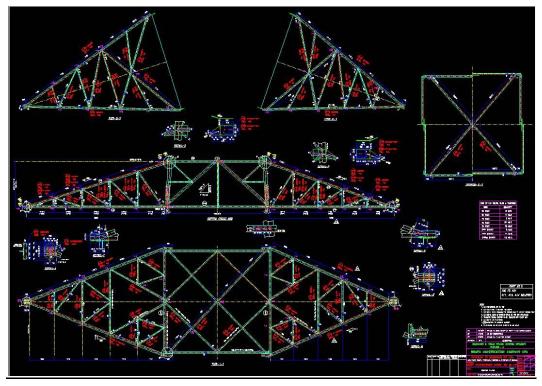
- We have over all 300 man-years of experiences in preparation of assembly, fabrication drawing and preparation for BOM transmission tower.
 - Our drawings are directly erected at site without Proto in certain projects.

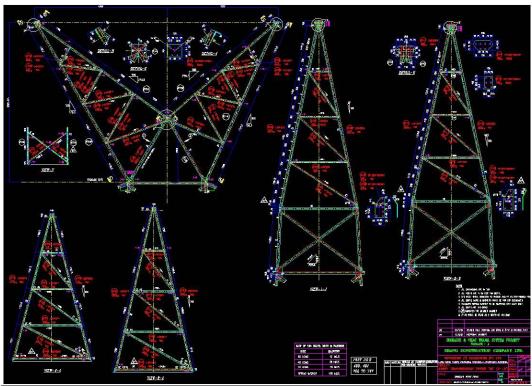
FABRICATION DRAWING OF TOWERS





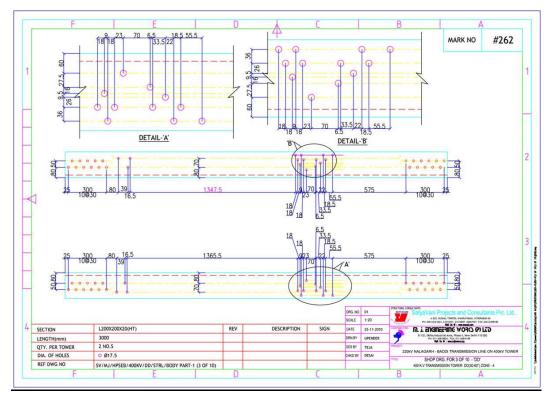








WORKSHOP DRAWING OF TOWER



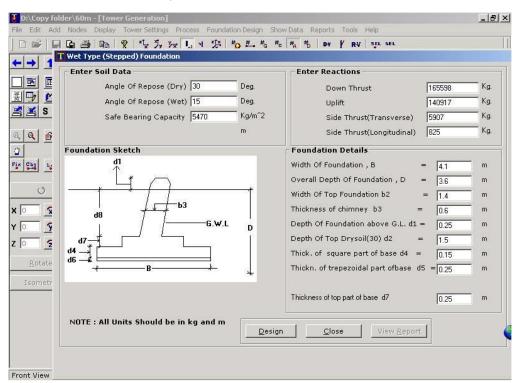
We have in-house software for preparation of bill of material.

FINAL BILL	OF MATERIAL F	OR BASE ± NORMAL T	OWER (SHEET 2	OF 10)				
220KV D/0	TRANSMISSION	LINE NALAGARH TO I	BADDI UNIT		STR.TYPE	: TYPE "D	" TOWER	
PURCHASE	R	: Himachal Pradesh St	ate Electricity E	loard Limited	BOM NO	: SV/MJ/I	HPSEB/B-024	
DRAWING	NO	: SV/MJ/HPSEB/400K\	//DD/STRL/2 of	10	BOM DATE	: 23-11-2	010	
MarK No.	Item	Description	Length(m Area(m^2)	kg/m (kg/m^2)	Weight per pc.(kg)	Nos	Weight (kg)	Remarks
#235A	P. RED	L75X75X5	5.785	5.700	32.974	4		
#235	P. RED	L75X75X5	5.785	5.700	32.974	4	131.898	
#236	P. RED	L45X45X4	1.852	2.700	5.000	4	20.002	
#237A	P. RED	L45X45X4	1.732	2.700	4.676	4	18.706	
#237	P. RED	L45X45X4	1.732	2.700	4.676	4	18.706	
#238A	P. RED	L45X30X4	1.262	2.200	2.776	4	11.106	
#238	P. RED	L45X30X4	1.262	2.200	2.776	4	11.106	
#239	P. RED	L55X55X4	3.624	3.300	11.959	4	47.837	
#240	P. RED	L45X30X4	0.904	2.200	1.989	4	7.955	
#241	H. RED	L45X30X4	1.444	2.200	3.177	4	12.707	
#242	H. RED	L45X45X4	1.872	2.700	5.054	8	40.435	
#243	H. RED	L45X45X4	2.913	2.700	7.865	4	31.460	
#244	H. RED	L50X50X4	2.246	3.000	6.738	8	53.904	
#245	H. RED	L60X60X4	4.383	3.700	16.217	4	64.868	
#246	H. RED	L45X45X4	2.746	2.700	7.414	8	59.314	
#247	H. RED	L45X45X4	2.014	2.700	5.438	8	43.502	
#248	H. RED	L75X75X5	5.816	5.700	33.151	4	132.605	
#249	H. RED	L45X30X4	1.363	2.200	2.999	8	23.989	
#250R	H. RED	L45X30X4	0.848	2.200	1.866	4	7.462	
#250L	H. RED	L45X30X4	0.848	2.200	1.866	4	7.462	
#251L	H. RED	L55X55X4	3.823	3.300	12.616	4	50.464	
#251R	H. RED	L55X55X4	3.823	3.300	12.616	4	50.464	
#252	PLT	PLT140X140X6TH	0.020	47.100	0.923	32	29.541	
#253	PLT	PLT140X140X6TH	0.020	47.100	0.923	8	7.385	
				Total weig	ht (kg)		1,014.776	
								(-)
FOR B	OLTS, NUTS &	WASHERS WITH 1	0% EXTRA]				
Size Quantity (Nos)			Weight (kg)	1				
M16X35 102		11.934	1					
M16X40 155			19.375	1				
M16 SPRING WASHERS 257			2.313	1				
6THK WASHERS FOR 5			0.425					
	Total weig	ht of above (kg) =	34.047	1				



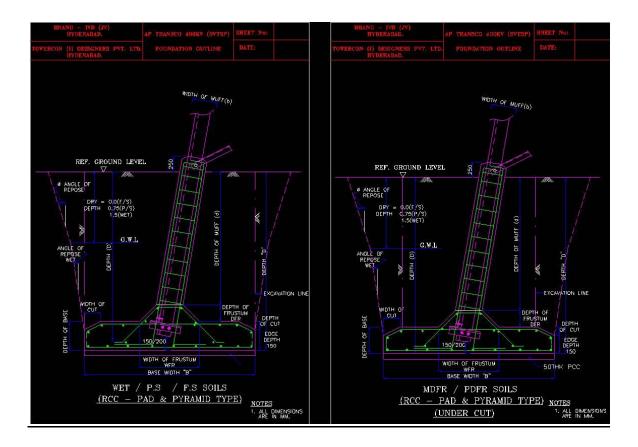
Foundations Optimized Design/Detailing:

- We optimize the foundations for any type of towers.
- Foundations are designed on broad classification of soils:-
 - Isolated foundation
 - Raft foundation
 - Wet type foundation
 - o Partially submerged type foundation
 - Wet black cotton soil type foundation
 - Dry fissured rock type foundation
 - Submerged fissured rock type foundation
 - Dry type foundation
 - o Hard rock type foundation
 - o Partially block cotton soil type foundation
 - Pile foundation etc.,



INPUT DATA IN TowerCAD FOR FOUNDATION

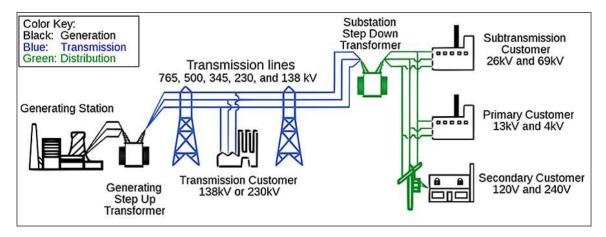




Design of Sub Station and Switch Yards:

- We design substation for power generation, transmission and distribution systems such as,
 - o Gantry, Boom
 - Transformer
 - Circuit breaker
 - Current transformer
 - Isolator, wave trap
 - Lighting arrester
 - o Potential transformer
 - Lighting mast towers.



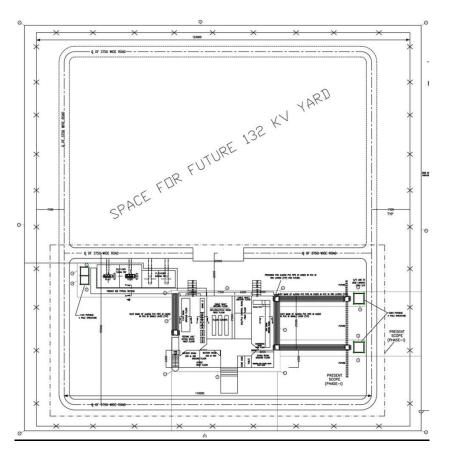


POWER PROCESS

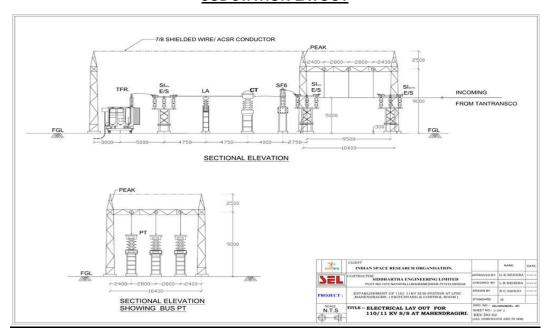


GOOGLE LAYOUT





SUB STATION LAYOUT

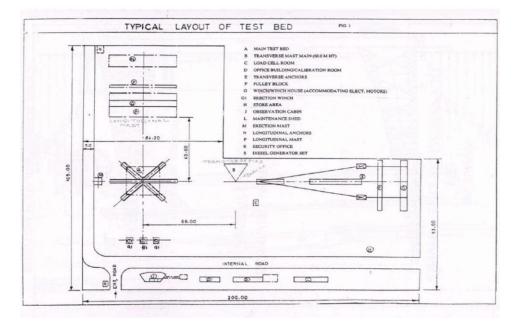


SUB STATION SECTION



Tower Testing Station Design, DPR & Feasibility:

- Tower testing station is a special plant for testing various tower designs.
 - o Tower testing equipment room and Testing station layout



- Transverse Face Structure
- o Longitudinal face tower
- Tower testing monitory room.





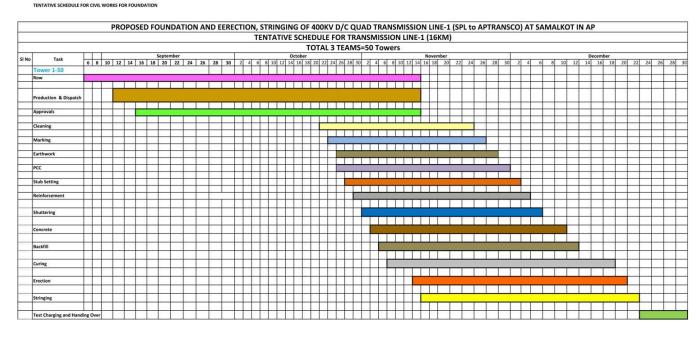
Transmission Line Up-Gradation:

- Transmission line up-gradation is the process of increasing the capacity of existing tower
 line to next higher voltage without any damage of tower.
- Up gradation can also be done by using the different type materials for conductors and insulators.

Project Planning & Scheduling:

- We also undertake projects which includes
 - o Planning,
 - Estimation
 - Cost & Risk,
 - Scheduling
 - Project monitoring

PROPOSED CIVIL WORKS AND EERECTION, TESTING & COMMISIONNINGOF 400KV D/C QUAD TRANSMISSION LINES AT SAMALKOT IN AI



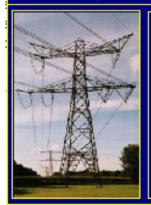


Tower Software Supply and Training:

- We have experienced employees who are well trained in designing any kind of structure.
- We have in-house software namely "TowerCAD" by which tower designing can be done. "CABFADD" by which Roof Top Towers designing can be done.



(An Integrated Product for Design, Analysis and Report Generation of Steel Lattice Towers)



Version: 4.0

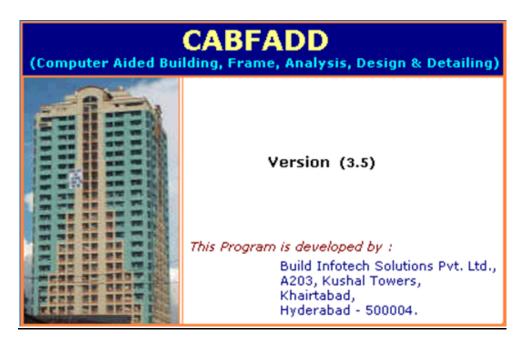
Build Infotech Solutions Pvt. Ltd.

A-203, Kushal Towers

Khairatabad, Hyderabad - 500004 Phone: 91-40-23321623,23314437

Visit Us at : www.buildinfotech.com

INTEGRATED SOFTWARE FOR DESIGN & ANALYSIS OF STEEL LATTICE TOWERS



INTEGRATED SOFTWARE FOR BUILDING FRAME ANALYSIS, DESIGN AND DETAILING



• We also use software such as "STAAD Pro" for designing and "AutoCAD" for drafting and detailing.

Tower design standardization:

- A power transmission tower consists of the following parts like Peak, Cross arm, Boom,
 Cage, Tower Body, Stub/Anchor Bolt and Base plate assembly of transmission tower.
- According to the angle of deviation there are four types of transmission tower
 - o A-Type tower angle of deviation 0 to 2°







 $\circ~$ B-Type tower – angle of deviation 2° to 15°





 \circ $\,$ C-Type tower – angle of deviation 15° to 30° $\,$





SatyaVani Projects and Consultants Pvt. Ltd. | Confidential



o D-Type tower – angle of deviation 30° to 60° or any other types.





Tower Design Checking/Verification:

- After completion of tower design, our expert engineers check the design in various aspects such as wind load assessment, seismic loads etc.
- Verification is done whether everything is done according to the code and as desired by the client.

Bid Documents Preparation/Evaluation:

- We have a team for bidding who are experts in bid documents preparation and evaluation process.
- Evaluation is done in the form of
 - o unit price contract



- lump sum contract
- cost plus contract
- percentage based contract
- o EPC
- o PPP

Compact Line Design

- Before proposing the tower location, we try to know the price ranges in that area for row so that if prices are too high we plan accordingly to avoid that area as this may increase the initial investment.
- Reducing the right of way will provide an efficient and economical design with a lesser compensation rates.
- In compact line designing it should be taken care such that stability and strength are not reduced in the process of reducing the right of way.

Inspection and Certification of Transmission Towers:

- While execution of transmission tower proper inspection should be done at each and every stage of the tower execution.
- Our project engineers are trained to do detailed inspection.
- In the process of inspection, he fills the details of the tower members; a cross section detail etc., in a check list available with him and sends that to our office.
- Our engineers thoroughly check the data entered and certifies that the tower is safe if it found safe and vice versa.

Project Management & Monitoring:

- In the process of executing the project, project is planned and monitored accordingly.
- In this availability of materials, costs, time etc., are taken into consideration and project is planned such that maximum build ability is achieved.



Quality Control & Assurance:

- Quality Control & Assurance involves checking the quality of works such as
 - o workmanship,
 - finishing,
 - o materials purchased,
 - o prepared and fabricated as per standards,
 - o testing them in Laboratories,
 - o rejecting the non-standard material,
 - o maintaining the registers,
 - o recommendations for fixing the responsibility if low standards are noticed,
 - o reconciliation of materials,
 - Maintaining the dimensional record i.e. Measurements/Dimensions before and after execution.











Pre-Dispatch inspection:

- Verification of Materials for Correctness of quality based on bill of materials at dispatch yard.
- Verification of test certificate submitted by manufacturer with respect to I.S code at dispatch yard.
- Material quantities are checked as per BOQ (bill of quantity).
- Material dimensions are checked as per Fabrication drawings.
- Physical random check for Galvanizing thickness.
- Physical verification and checking of hardware.
- Punching test for all materials.





On Site Quality Audit:

- we have well trained site engineers who check the site quality according to the check list, which includes
 - o Pit Marking
 - Excavation





o P.C.C





o Tower Footing



Stub Setting Alignment.





- Stage passing certification (Excavation, P.C.C, Stub setting alignment & Concreting)
- o Completion of Tower Foundation





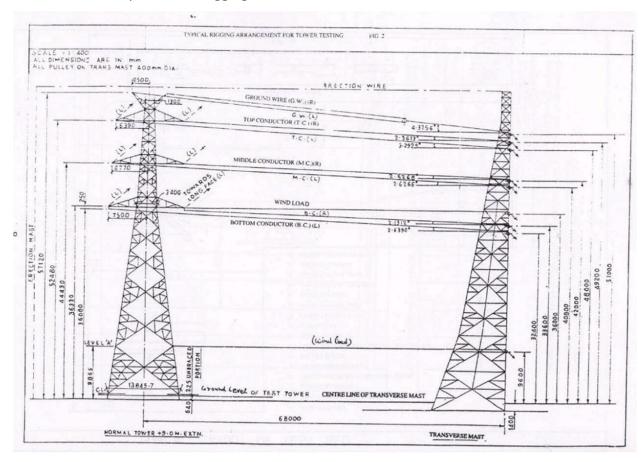
Testing Coordination:

- We have experience in testing coordination such as
 - o predict the problems which may result in tower failure,





- Identification of test location and test bed
- Preparation of rigging chart.





o Final test certification co-ordination.



MECHANICAL ENGINEERING DIVISION TOWER TESTING STATION

CPRI NO CRTL/MED(TTS)/2001/S1/BCC/T-1/2001-2002 Dated: 06.06.2001 Page 2 of 17

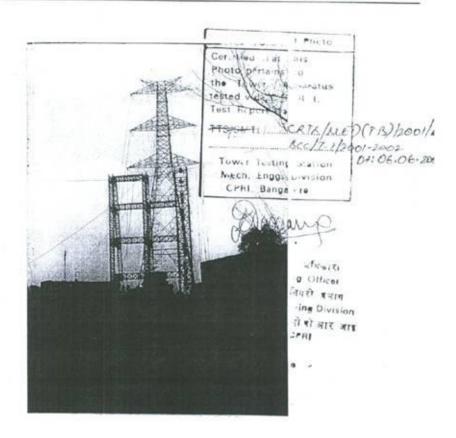
		WITNESS SHEET			
1.	Tested at	Tower Testing Station Central Research and Testin Central Power Research Inst Bangalore - 560 080			
2.	Description of Test	: 400kV D/C, Type 'DA' Mkd 'DA' Tower with +9M Extension			
3.	Condition of Tower	: Black.	: Black.		
4.	i) Referred by	M/s Bhanu Construction Co. Ltd., Hyderabad Associated with M/s IVRCL Infrastructures & Projects Ltd, Hyderabad			
	ii) Tower Designer	M/s. Towercon India Design	M/s. Towercon India Designers (Pvt) Ltd, Hyderabad		
	iii) End User	M/s. APTRANSCO, Hyderabad			
5.	Reference	1S:802 (Part III)-1978	1S:802 (Part III)-1978		
6.	Date of test	: 30 th April 2001 & 1 st May 2001			
7.	Witnessed by				
SI. N	No. Name &	Designation	Signature		
1.	Mr. D. Koteswara Rao Assistant Engineer, APTRANSCO, Hyderabad				
2.	Mr. S. Siddilingam Asst. Divisional Engineer, APTRANSCO, Hyderabad				
3.	Mr. P. Surya Prakash M/s. Towercon India Designers (Pvt) Ltd., Hyderabad				
	IVES. TOMETOON		ad O		
4.	Miss. D. Manju M/s. IVRCL, H	la O 1/	ul 1/5/0)		
4.	Miss. D. Manju	la yderabad D. Hayi nan, r-T&D	1/1/0) - 1/05/2001		





MECHANICAL ENGINEERING DIVISION TOWER TESTING STATION

CPRI No. CRTL/MED(TTS)/2001/S1/BCC/T-1/2001-2002 Dated: 06.06.2001 Page 16 of 17



TOWER BEFORE TEST





MECHANICAL ENGINEERING DIVISION TOWER TESTING STATION

CPRI No. CRTL/MED(TTS)/2001/S1/BCC/T-1/2001-2002 Dated: 06.06.2001 Page 17 of 17



TOWER AFTER TEST



Neum, Luge, Division

WITNESSES .



ORGANIZATION DETAILS

1.	Name of the Company	SatyaVani Projects and Consultants (AP) Pvt. Ltd. (SVPCPL)
2.	Address	A-203, Khushal Towers, Khairatabad, Hyderabad, INDIA. Pin: 500 004
3.	Telephone Nos. including Mobile	+ 91 - 40 - 23321623; Mobile: 7569856557 (Mukherjee D); 9550011222 (Sreedhar Bharatam, Executive Director)
4.	Fax No.	+ 91 - 40 - 23308184
5.	Constitution of the Firm Proprietary / Partnership / company	Private Limited Company
6.	Year of Establishment	1994
7.	Key Personnel	Surya Prakash. P – Managing Director B Sreedhar – Executive Director Subrahmanyam. CVS Director (Designs) Gurunath Sirsi – Chief Architect K S V Padmaja Rami - Head (Towers) T Satyapal Namdev Rao - Sr.Manager (Tower-PMC) V A Chakravarthy – Sr.Manager (S&P, QS)
8.	Banker's Name	HDFC Bank Ltd., Begumpet Branch, HYDERABAD
9.	Company PAN Number	AAACT8353N
10.	Company GST Number	AAACT8353N1ZT



KEY PERSONNEL

MANAGEMENT TEAM

SI. No.	Name	Designation	Qualification	Total Experience (As on 2021)
1	Surya Prakash. P	Director	M.S(Structures), IIT Madras, Chennai	33 Years
2	V S Murthy	Finance Director	B.Com. LLB, ICWA	45 Years
3	B Sreedhar	Executive Director	B. E.	27 years
4	K Srinivas	Director (PMC)	B.E. (Civil)	30 years
5	Subrahmanyam. CVS	Director (Designs)	B.E (Civil)	27 years
6	Satyapal Namdev Rao	Sr. Manager (Towers)	B.E (Civil)	26 years
7	V. L. N. Murthy	Tower Design Head	Civil	25 years

	Head Office Team				
Sl.No	Circle	Engineer Name	Designation	Qualification	Experience
1		T.Satyapal Namdev Rao	Sr. Manager Operations	B E (Civil)	15 yrs
2		J K PurnaChandar	Electrical Head	BE (EE)	11 yrs
3		S.DharaniDhar	Corp.Coordinator	B.Tech (ECE)	12 yrs
4	НО	Vamsi Krishna	Tower Design .Coordinator	DCE	16 yrs
5		Upendra Kumar	CAD	DCE	12 yrs
6		G Suresh	Corp. Coordinator	B.E	12 yrs
7		G Raju	Project Coordinator	B.Tech (ECE)	12 yrs

KEY PERSONNEL TOWERS DESIGN TEAM

SI No.	Name	Designation	Qualification	Total Experience
1	C.V.S. Subramanyam	GM Design	BE (Civil)	27 yrs
2	V.L.N. Murthy	Sr. Tower Design Head	DCE	25 yrs
3	VRN Ayyangar	DGM – Structural Design	M.Tech (Structures)	13 yrs
4	S. Sraavya	Design Engineer	M.Tech (Structures)	5 yrs
5	K V S Padmaja	Sr. Design Engineer	M.Tech (Structures)	15 years